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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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28469	7590	08/31/2005	EXAMINER	
PRICE, HENEVELD, COOPER, DEWITT, & LITTON, LLP/GENTEX CORPORATION 695 KENMOOR, S.E. P O BOX 2567 GRAND RAPIDS, MI 49501			YAM, STEPHEN K	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 08/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/783,273

Applicant(s)

FOGG ET AL.

Examiner

Stephen Yam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 and 20-23 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-7 and 20-23 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

This action is in response to Amendments and remarks filed on August 15, 2005. Claims 1-7 and 20-23 are currently pending.

#### *Specification*

1. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Appropriate correction is required.

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the

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following is required: The specification does not describe the origin or specifics regarding specifically securing an imager board within *5 degrees and -5 degrees*. In fact, the specification describes securing an imager board within 2.5 degrees and -2.5 degrees (page 27, line 6) which is inconsistent with the claimed invention.

### *Claim Objections*

3. Claim 20 is objected to because of the following informalities:

In Claim 20, lines 4-5, "an actual image sensor optical axis" lacks proper antecedent basis, as it is unclear whether the term is identical to the recited "desired image sensor optical axis" on lines 3-4.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 4, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Michaels et al. US 5,124,549.

Regarding Claims 1 and 20, Michaels et al. teach (see Fig. 1,3,4) an automatic vehicle exterior light/vehicle equipment control system comprising an attachment member (46) and

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carrier/baffle (22, 48) configured to secure an imager board (24, 34) within approximately 5 degrees and -5 degrees of a desired image sensor optical axis (see Col. 5, lines 54-61), the attachment member and the carrier cooperating to define an actual image sensor optical axis (see Fig. 1).

Regarding Claims 3 and 4, Michaels et al. teach the imager board vertically and horizontally aligned within 5 and -5 degrees of a desired image sensor optical axis (see Col. 5, lines 54-61).

### *Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6, 7, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michaels et al.

Regarding Claims 6, 7, 21, and 22, Michaels et al. teach the system in Claims 1 and 20, according to the appropriate paragraph above. Regarding Claims 6 and 21, Michaels et al. also teach the image sensor and an image sensor control logic (see Col. 6, lines 47-50) are integrated in a board (24) (see Col. 6, lines 47-50). Regarding Claim 22, Michaels et al. teach (see Fig. 3,4) a shim (30) positioned at least partially between the attachment member and the carrier to define a second image sensor optical axis (using lens (32)). Michaels et al. do not teach the board as a common application specific integrated chip. It is well known in the art to provide electronic

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components on a common application specific integrated chip (ASIC) and a common silicon wafer, to utilize common manufacturing methods to assemble the electronics. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a common application specific integrated chip and a common silicon wafer for the board in the system of Michaels et al., to lower production costs and reduce design complication by using common manufacturing techniques.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Michaels et al. in view of Stam et al. US 6,429,594.

Regarding Claim 2, Michaels et al. teach the system in Claim 1, according to the appropriate paragraph above. Michaels et al. do not teach the control system is configured to self calibrate an image area of an image sensor to compensate for minor image sensor misalignment. Stam et al. teach a similar system, with a control system is configured to self calibrate an image area of an image sensor to compensate for minor image sensor misalignment (see Col. 28, lines 3-7, 46-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the control system configured to self calibrate an image area of an image sensor to compensate for minor image sensor misalignment, as taught by Stam et al. in the system of Michaels et al., to increase accuracy and compensate for small angle aiming variations, as taught by Stam et al. (see Col. 10, lines 40-55).

9. Claims 5 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michaels et al. in view of Blank et al. US 4,708,410.

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Regarding Claim 5, Michaels et al. teach the system in Claim 1, according to the appropriate paragraph above. Michaels et al. also teach the system in a rearview mirror assembly (see Col. 3, lines 26-29). Michaels et al. do not teach a ball for attachment of a rearview mirror assembly. Blank et al. teach (see Fig. 3B and 4A) a rearview mirror assembly with a ball for attachment (see Col. 6, lines 34-63). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a ball for attachment of a rearview mirror assembly as taught by Blank et al. in the system of Michaels et al., to provide simple and effective attachment of the rearview mirror assembly to the vehicle.

Regarding Claim 23, Michaels et al. teach the system in Claim 20, according to the appropriate paragraph above. Michaels et al. do not teach at least one additional device selected from the group comprising: an electro-optic mirror element; an ambient light sensor; a glare light sensor; an information display; an indicator; a microphone; a compass; an operator interface; a temperature indicator; a Bluetooth interface; a wireless transceiver; a vehicle bus interface; a passenger side restraint status display and an electro-optic mirror element control. Blank et al. teach (see Fig. 3A) a similar system with a compass (62). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a compass as taught by Blank et al. in the system of Michaels et al., to provide additional functionality in the rearview mirror system for user convenience.

### *Response to Arguments*

10. Applicant's arguments filed August 15, 2005 have been fully considered but they are not persuasive.

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With regards to the objection to the Abstract, Applicant argues that the particular usage of the term "should" in the MPEP as opposed to "shall" implies that such instructions are simply guidelines and are not mandated. While these instructions do exist, applicants are generally provided with a broad scope as to what the Abstract may contain. However, Examiner asserts that Applicant's particular abstract lacks any particular details regarding Applicant's invention or improvements, and is even more broad than Applicant's title. Examiner directs Applicant to view the cited prior art so as to provide a basis for the scope of a proper abstract.

With regards to the objection to the specification as failing to provide proper antecedent basis for the claimed subject matter, Applicant argues that "in establishing a disclosure, applicant may rely not only on the description and drawing as filed but also on the original claims...", citing MPEP 608.01(l). Examiner asserts that while the originally filed claims are included in the disclosure, any claimed subject matter still must be recited in the specification. Examiner directs Applicant to the full reference to MPEP 608.01(l) (emphasis placed in underline):

In establishing a disclosure, applicant may rely not only on the description and drawing as filed but also on the original claims if their content justifies it.

Where subject matter not shown in the drawing or described in the description is claimed in the application as filed, and such original claim itself constitutes a clear disclosure of this subject matter, then the claim should be treated on its merits, and requirement made to amend the drawing and description to show this subject matter. The claim should not be attacked either by objection or rejection because this subject matter is lacking in the drawing and description. It is the drawing and description that are defective, not the claim.

It is, of course, to be understood that this disclosure in the claim must be sufficiently specific and detailed to support the necessary amendment of the drawing and description.

Examiner further directs Applicant to MPEP 608.01(o) (emphasis placed in underline):



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The meaning of every term used in any of the claims should be apparent from the descriptive portion of the specification with clear disclosure as to its import; and in mechanical cases, it should be identified in the descriptive portion of the specification by reference to the drawing, designating the part or parts therein to which the term applies.

As Applicant does not disclose in the specification as to securing the imager board within approximately 5 degrees and -5 degrees of a desired image sensor optical axis, the objection to the specification is proper.

With regards to Claims 1 and 20, Applicant argues that the light sensor of Michaels is not an "image sensor" as the Michaels discloses "light sensor comprising a single photo responsive detector" (see Applicant's arguments filed August 15, 2005, Page 8, 4<sup>th</sup> full paragraph). Examiner asserts that while applicant may construe an "image sensor" as an array of photosensitive elements or having a plurality of pixels, a single photo-responsive element as disclosed in the invention of Michaels still senses and captures an image and is considered an "image sensor". The detector of Michaels detects an image as defined by the particular characteristics of the detector (ie.- size, sensitivity) and the particular characteristics of the lens (ie.- focusing, zoom). Therefore, the lens of Michaels defines the area of an image to impinge on the detector, which detects a representation of the image (which all image sensors perform, regardless if they are a single element or a plurality or array of elements). Therefore, Examiner asserts that the light detector of Michaels is an "image sensor" as known by one of ordinary skill in the art.

Furthermore, Examiner cites Col. 5, lines 49-53 of Michaels, which refers to detector 34 as an "*imaging detector 34*". Michaels provides further references to providing an image to the

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detector, in Col. 4, lines 18-22 ("*image size*"), Col. 5, lines 41-43 ("*image distance or image location*"), Col. 7, lines 15-16 ("*image plane of the lens*"), and Col. 8, lines 15-16,25.

Applicant further argues "the alignment pin 46 (which the Examiner refers to as an "attachment member") of Michaels is not an equivalent structure to the attachment member recited in the claims of the present application" and "have no effect what so ever on positioning of the detector." (see Applicant's arguments filed August 15, 2005, Page 9, 1<sup>st</sup> continuing paragraph). Examiner asserts that Applicant's claim language does not recite the attachment member as "positioning the detector" as argued by Applicant, but simply states that the attachment member is configured to "secure the imager board within approximately 5 degrees and approximately -5 degrees of a desired image sensor optical axis". The optical axis of the image sensor is defined by the specific position and orientation of the lens, and the position and orientation of the lens is defined by the usage of the alignment pins (see Michaels- Col. 5, lines 9-11). Michaels further discloses "*The orientation and distance between the lens and light detector must be maintained to very tight tolerances to insure proper performance. This is achieved, in part... Also, the lens 32 is supported by a series of lens support platforms 44 and alignment pins 46...*" (see Michaels- Col. 4, lines 58-66). Thus, the alignment pins 46 of Michaels (which Examiner correlates to the "attachment member" as recited in Applicant's claim language) "secure the imager board within approximately 5 degrees and approximately -5 degrees of a desired image sensor optical axis", as recited in Applicant's claim language, by maintaining the desired image sensor optical axis in relation to the image sensor.

As Applicant has not disclosed a special definition for the term "image sensor" in the disclosure, and as the alignment pin of Michaels satisfy the limitations regarding Applicant's

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claimed attachment member, Examiner submits that Michaels teaches the image sensor and attachment member as disclosed in Claims 1 and 20, and therefore, Claims 1 and 20 remain anticipated under 35 U.S.C. 102(b) by Michaels.

Thus, as set forth above, this final rejection is proper.

### *Conclusion*

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Yam whose telephone number is (571)272-2449. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571)272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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THANH X. LUU  
PATENT EXAMINER